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## A CASE OF PARAMEATAL URETHRAL CYST WITH CALCULI

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Parameatal urethral cyst is very rare. Although 15 cases have been reported in Japan, no case of parameatal urethral cyst with calculi has previously been reported. We report the first case of parameatal urethral cyst with calculi in a 22-year-old female patient.

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**Key words:** Parameatal urethral cyst, Calculi, Urethral diverticulum

### INTRODUCTION

Female parameatal urethral cyst is a cyst located near the urethra without communicating with it<sup>1)</sup>. Though cases of urethral diverticula with calculi have been reported, no case of parameatal urethral cyst with calculi has previously been reported. Here we describe the first case of parameatal urethral cyst with calculi in a 22-year-old female patient.

### CASE REPORT

A 22-year-old single Japanese female noticed discomfort of the meatus. A parameatal mass was detected by the local hospital and she was referred to our clinic for further evaluation and treatment. A smooth spherical mass, 1 cm in diameter, just below the urethral meatus was found (Fig. 1). Urine analysis showed no abnormalities and no urinary tract infection was suspected. The mass was hard and non-tender on palpation. Excretory urography showed no abnormalities of the upper urinary tract. Past history revealed 5 episodes of cystitis. A transverse suburethral meatal incision over the mass, about 2 cm in diameter was made. The adhesion between the mass and the surrounding tissue was not clear. Because the wall was thin, two stones were seen through it. The mass, together with underlying urethra was

completely excised and the defect of the urethra was closed with 3-0 catgut sutures. A urethral indwelling catheter was used. The surgical specimen was opened and two gray-yellowish stones, 0.3 and 0.8 cm in diameter, were removed (Fig. 2). No fluid was found in the specimen. Since the mass was cystic and no communication between the cyst and the urethra was found on macroscopic inspection, she was diagnosed as having a parameatal urethral cyst with

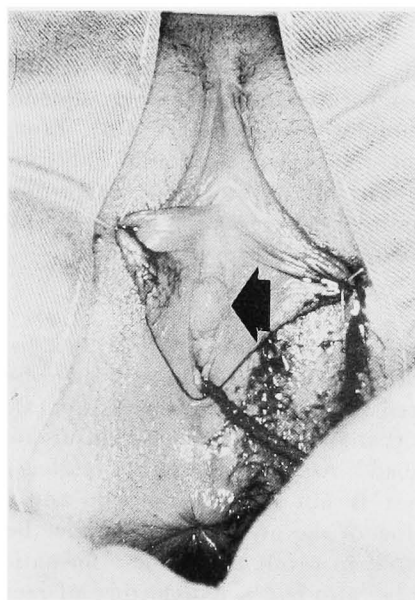


Fig. 1. A parameatal mass (◄)

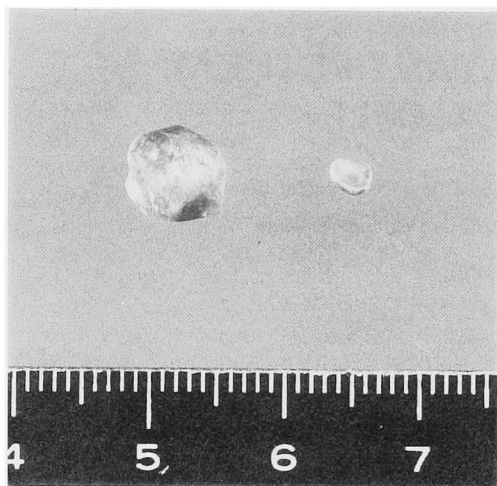


Fig. 2. Two stones in the parametral urethral cyst

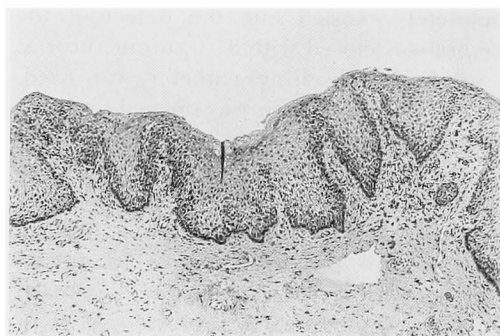


Fig. 3. Microscopic picture of the cyst wall (H&E,  $\times 125$ )

calculi. Histologically, the cyst was lined by non-keratinizing stratified squamous epithelium without atypia (Fig. 3). Elongation of rete ridge and mild infiltration of chronic inflammatory cells were noted. The postoperative course was uneventful and no urine leakage was found.

### DISCUSSION

Female parametral urethral cyst is a rare disease, and only 15 cases have been reported in Japan<sup>2)</sup>. However, no calculus in that kind of cyst has previously been described. Although the exact etiology of the cyst is not known, infection and obstruction of the urethral glands have been suggested to result in the cyst formation. Our case also had a past history of recurrent cystitis. If these cysts rupture into

the urethral lumen, they are called diverticulum of the urethra<sup>3,4)</sup>. Wharton et al. noted a similarity in etiology between suburethral cysts which seemed to include parametral urethral cysts and diverticula of the urethra. They also suggested that at least some suburethral cysts were possibly diverticula in which the urethral opening was not evident or was temporarily closed<sup>5)</sup>. They proposed the broad sense of diverticulum of urethra, which implied not only diverticulum of urethra but also suburethral cysts and suburethral abscess in the concept<sup>5)</sup>. Our case showed no evidence of communication between the cyst and the urethra, physically or grossly. Thus, it is reported as a case of parametral urethral cyst with calculi. However, from the concept proposed by Wharton, the distinction between diverticulum of urethra and parametral urethral cyst may not be meaningful.

Although the etiology of stone formation in the present case is not known, stasis of infected exudate with deposition of salts and desquamated epithelium covering the cyst is suggested to be one cause of stone formation in this patient, as was postulated for calculus formation in diverticulum of urethra<sup>6)</sup>.

Differential diagnoses of parametral urethral cysts should include urethrocele, periurethral abscess and ectopic ureterocele. Our reported cyst was very hard because of the presence of calculi, but connective tissue neoplasms such as lipoma, leiomyoma, fibroma, lymphangioma, hemangioma, hemangioblastoma as well as their malignant counterparts should be included in the differential diagnoses<sup>7)</sup>. Excision of the entire cyst seems to have been sufficient treatment and no recurrence of the cyst has been reported yet.

### CONCLUSION

The first case of parametral urethral cyst with calculi in a 22-year-old female patient was reported. The etiology of parametral urethral cyst and stone formation, differential diagnoses, as well as treatment were discussed.

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## 和文抄録

## 結石を伴った傍尿道嚢腫の1例

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22歳の反復性膀胱炎の既往歴を有する女子の、結石を伴う傍尿道嚢腫の1例を報告した。傍尿道嚢腫の病因としては尿道周囲腺の感染と閉塞が想定されているが嚢腫が尿道内にドレナージしたものが尿道憩室となるとの説もあり両疾患は密接な関係があるものと考え

られる。結石形成に関しては嚢腫の感染と共に塩類の析出や脱落した上皮が核になることなどが関係しているものと考えられている。治療としては嚢腫の完全な切除のみで十分と思われる。

(泌尿紀要 39: 961-963, 1993)